and no wind had passed for about two days. The abdomen was enormously distended, and caused intense suffering; the pulse was small and quick, the extremities cold, and the countenance very anxious. In the evening Mr. Bradley requested me to see the patient. His state remained the same. I advised an injection of a quart or more of warm gruel to be slowly administered with a long tube, this to be followed by an injection of half a pint of olive-oil in the hope that the oil might rise through the gruel and reach the obstruction. Belladonna liniment was also to be applied all over the abdomen, and the subcutaneous injections to be continued. About three pints of fluid were got into the bowel, but no feculent discharge followed; the liniment gave some relief. Next morning I found the patient in great suffering; he had not passed any wind, and he had spent a wretched night. He now had also a decided hiccough, and the abdomen was enormously distended. There neither was, nor had been, much vomiting. The previous evening I had been much tempted to puncture the abdomen with a fine trocar, and in the morning the desire strongly returned. Somewhat later in the day I was with Mr. Teale, and after laying the case before him, I asked him if he would operate for me. He agreed to do so, and we visited the infirmary at once. We found the patient in great distress; he was tossing restlessly about in bed, complaining of the distension of his abdomen, and the breathing was seriously impeded. Mr. Teale plunged an exploring trocar (No. 1, Weiss) into the distended transverse colon. On withdrawing the trocar air rushed through the canula with a hissing noise and the abdomen slowly fell. The air was highly offensive. When the current grew weaker, Mr. Teale made a second puncture into the descending colon, which was greatly swollen; the result was the same. The body had now fallen much, and had become quite soft; the patient expressed the greatest relief, and thanked us warmly. His countenance became placid, the breathing comparatively easy, and he soon sank into sleep. I ordered the morphia to be continued, and poultices to be kept on the body. On my visit next day I found our treatment had been remarkably successful. Not only had the relief continued, and the poor man slept comfortably; but the bowels had recovered their activity. He had passed a great quantity of wind to his great comfort, and many stools; some of these stools were seen by Mr. Bradley, who reports that they were copious and feculent. So far, then, the operation seemed to have been eminently successful. Unfortunately the pneumonia had not stayed its course, and the whole of one lung behind was now consolidated, and more than half of the other. He sank from the lung mischief in about two days more—the abdomen becoming again somewhat distended before death. At the autopsy, almost the whole of the left lung was found in a state of 'hepatization,' and a large part of the right lung also. The other organs were healthy; in particular there was no trace of peritonitis, nor had any air escaped into the peritoneal cavity. No traces of the punctures could be detected except upon the outside of the body. I need not stay to point out how often patients beg for relief from a distended abdomen, nor, I think, to show that the simple and painless operation which we practised proved to be quite without danger, and gave great and immediate relief, not only by emptying the bowel of wind, but by enabling it to contract upon, and to repel, the feces which obstructed it. The operation is one which any physician may have recourse to in a moment, and if he has not a fine trocar at hand he may use the needle of the morphia syringe. I may add, that the autopsy did not seem to support my view of the causation of the bowel paralysis. There was no appearance of inflammation on the under side of the diaphragm, nor was the surface of the bowel injected with blood."—*The Practitioner*, Feb. 1869.

OPHTHALMOLOGY.

51. *Interesting Case of Defective Vision.*—Major **TENNANT**, R. E., communicated to the Royal Astronomical Society the following particulars of certain defects in his own vision, and of the means by which they were corrected. This

account is interesting in several particulars, and may also perhaps lead to a new theory of the cause of the inability to distinguish colours which is peculiar to some persons, and sometimes results from disease.

"Many years ago, soon after I came to India, I found in looking at the Snowy Ranges of the Himmaleh with a telescope that to my eye the snow had a reddish-brown tint. Shortly after I found that this was not the same for both eyes, but that, in passing from my right eye to my left with a telescope, I seemed to pass, as it were, from the brownish tints of autumn to the brilliant ones of spring. Every object became brighter and clearer, and the greens were especially affected. Close examination showed me that the vertical and horizontal wires in a telescope were never pleasantly seen together. One was always clearer than the other, and any occasional perfect vision passed away after the effort to see wore off.

"I came to the conclusion then that there was really some defect in my eye. In 1857 and 1858 I was examining many of the double stars in Smyth's *Cycle*, and it struck me that I could not see blue stars two magnitudes larger than others there described which I did see. I also noticed that the very red stars described had never produced on me any marked impression of colour, and I deduced that my eyes were really somewhat insensitive to the blue rays.

"So matters stood till December, 1867, when I accidentally saw an optometer at Messrs. Horne & Thornthwaite's, which led me to ask Mr. Acland of that firm to examine my eyes. He came to the conclusion that I was somewhat shortsighted, and that the lenses of the eye did not refract as solids of revolution, but that a plano-cylindrical convex lens of 30 inches radius would nearly adjust my vision. I tried these, and, after finding the proper positions of the axes of the cylinders, found that the definition was enormously improved, and that the left eye was, as I thought, nearly perfect, and the right eye nearly as good as the left originally, but I was firmly convinced that I was not shortsighted. At last, however, I became convinced that I was so with these lenses, and a spherical surface of the same radius as the cylinder was ground inside it. Now my vision was superior to anything before. On the voyage out I have often seen eight stars of the *Pleiades* (and notes of their places are in a notebook) where I never before saw more than five; but I found now I had become longsighted, and could not use the glasses for reading, and became convinced that Mr. Acland's statement was correct, namely, that I was shortsighted, not because the near focus was short, but because I had a want of the usual range of adjustment and could not reach the distant one; when, therefore, distant vision was corrected the near vision became defective. I therefore made up my mind to have two sets of lenses.

"But before ordering them I determined to re-examine my eyes with great care, and I now found, on using an achromatic glass as an eyeglass, and a peculiar object, that, in reality, the estimate I had made of the improvement in my right eye was very nearly right. I now found that the convex surface for the right eye required a radius of 20.5 inches, and for the left eye one of 40, and that the concavity for distant vision required to be 27.5 inches in radius for each.

"The red tint now remained to be accounted for, and I have been led to what I believe to be the true solution of that, and also of the insensibility of the right eye to blue light. I should mention that habit makes me see mainly with the right eye; that is, that its image clearly predominates in ordinary vision.

"I had noticed that while my general vision of stars was much improved with the spectacles I had brought from England, and the sky became dotted with small objects invisible without them, some stars certainly were less clear. It only occurred to me recently on that occasion that α *Scorpii* was injured and *Saturn* improved in definition by the glasses, and I then remembered that α *Scorpii* had generally been the defaulter, the extreme beauty of that constellation having made it always catch my eye. It is evident *now* that my right eye is not achromatic, that the red rays being naturally focussed predominate in vision, and that when the luminous image of a star is focussed the blue rays do not claim notice, but when a blue star is seen, if it be so small as to be near the minimum of brightness, its image is too diffused to be visible.

"Now, my vision I used to think good. I have often at sea caught the masts and rigging of a ship before those searching for them; and the defects which I have spoken of I have frequently believed to be fancies, as they seemed inconsistent with many evidences that I had good vision. I should certainly have unhesitatingly trusted my eyes in any matter but colour. Possibly some of the strange discrepancies in description are due to similar defects of vision and we may, some day, find it necessary to make every observer of delicate phenomena, who claims credit, *prove that he can see*."—*Scientific Opinion*, Feb. 24, 1869, from *Monthly Notices of the Royal Astronomical Society*, Feb.

52. *Colour-Blindness.*—Dr. ARGYLL ROBERTSON states (*Edinb. Med. Journal*, Feb. 1869) that colour-blindness is not an unfrequent symptom of advancing amaurosis, and he expresses the belief, in which we fully concur, that it would be found to exist far more commonly than is supposed, were patients more frequently tested on the point. Dr. Moritz Bennedict states (*Der Daltonism dei Schnerven, Atrophie*, Arch. f. Ophth., Bd. x.) that during two years he has frequently observed colour-blindness, especially of red and green along with amaurosis accompanying tabes. He narrates six cases in which he found colour-blindness and amaurosis combined. Poland (*R. Lond. Oph. Hosp. Rep.*, vol. vii.) and Dr. Geo. Wilson (*Researches on Colour-Blindness*, 1855) each narrates cases caused by injuries to the head.

A case of colour-blindness with partial amaurosis, the result of disease, was recorded by the editor of this Journal, in the No. for Aug. 1840. Other cases will be found noticed in the editor's edition of Lawrence's "Treatise on the Diseases of the Eye," third edition, Philadelphia, 1854.

According to Mr. ERNEST HART (*Brit. Med. Journ.*, Jan. 16, 1869), "the true chromatic organs of the eye may be considered to be the cones, each of which bodies acts as a small prism, decomposing the light, so as to form at its base concentric coloured circles corresponding to the colours of the solar spectrum. The following are some of the chief results of clinical investigations made by using a fixed scale of colour types, in which scale the principal colours of the spectrum are arranged in the order adopted by M. Chevreul. In retinal apoplexy, when the effusions are large or situated in the central parts of the retina, the eye often sees objects coloured red or green, which coloration is sometimes changed during the course of the disease into violet or yellow. In albuminuric retinitis, partial colour-blindness is a symptom of advanced disease and disorganization of the retinal tissue near the yellow spot. In syphilitic inflammation of the deep-seated parts of the eye, perception of green colours, and sometimes of red, is lost. In cases of atrophy of the optic disk and of amblyopia caused by chronic alcoholism, similar perversions of the chromatic sense are presented; there is anæsthesia of the retina to certain compound colours, as light and dark green; violet is also taken for red, and brown for green. In atrophy of the disk, these aberrations are permanent; whilst in spirit-drinkers, they vary from day to day, and even hourly, presenting a succession of abnormal visual phenomena. Descriptions are also given by Galezowski of colour changes occurring with glycosuric retinitis, general and localized atrophic choroiditis, and during the course of various cerebral affections. These I have not fully verified. The remarkable morbid changes which occur in these diseases, do not appear to me to be so precise and uniform as described. But I am pursuing the clinical inquiry with care, and shall shortly publish some further results. The subject is an extremely interesting one, and deserving of careful study, as the chromatic scale is, in my opinion, an addition to ophthalmic means worthy of cultivation, and likely to be of value in the diagnosis of many cases of amblyopia, of which both the ophthalmoscope and the nature of the subjective symptoms fail to give any full explanation."

53. *Visual Hallucinations.*—A description is given by NAEGETI, in the *Bayr. Acad. Sitzgsber* (1868, 1), of certain hallucinations of vision occurring in his own person whilst he was confined to a darkened chamber for many days, in consequence of an injury inflicted by fire on the cornea, especially of the left eye. The hallucinations were various in character, though they consisted mostly of